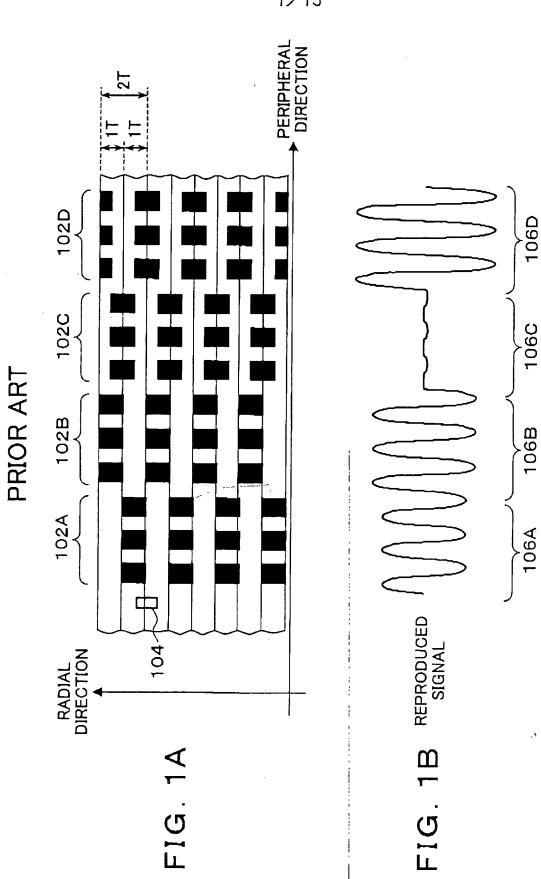
(312) 360 0080





POSITION DETECTING METHOD,... Feb. 9, 2004
Keiji Shimatani
Greer, Burns & Crain, Ltd. (Patrick Burns)
Ref. No. 1990.69557
Sheet 2 of 15 (312) 360 0080

2/15

FIG. 2A PRIOR ART

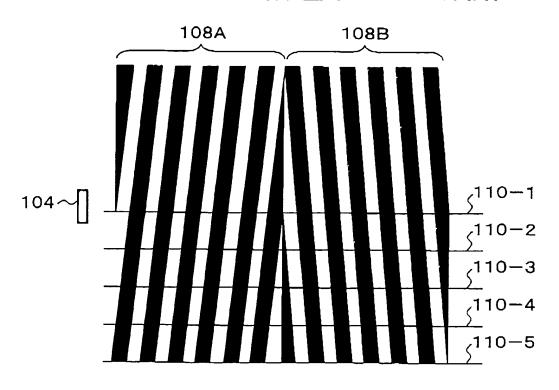
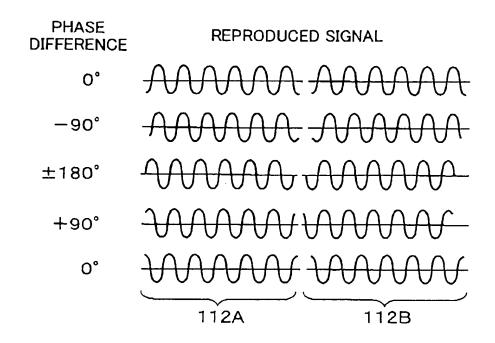
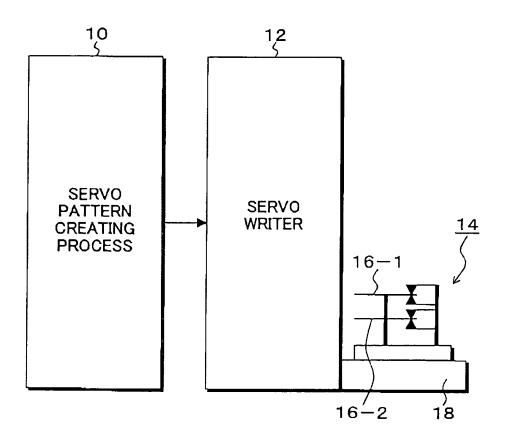


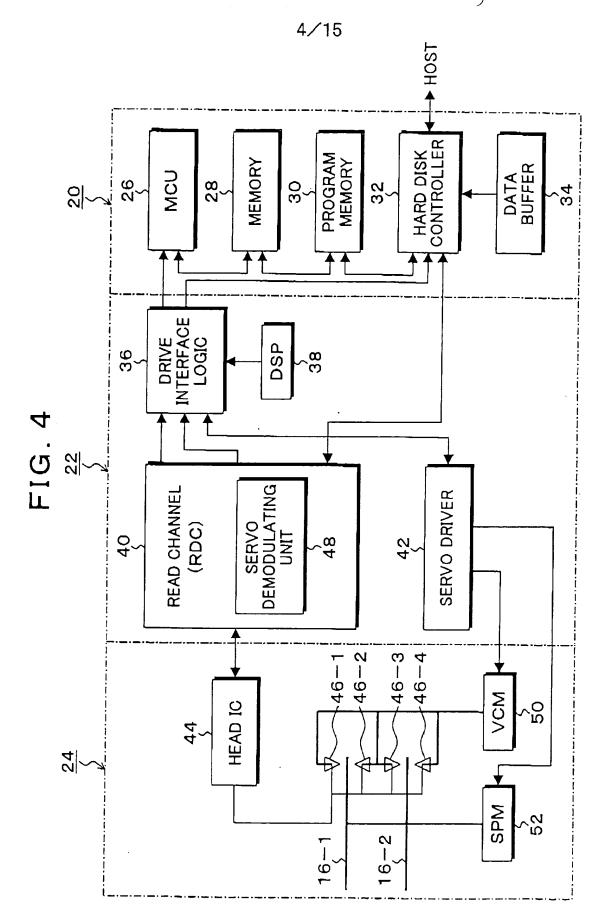
FIG. 2B PRIOR ART



POSITION DETECTING METHOD,... Feb. 9, 2004
Reiji Shimatani
Greer, Burns & Crain, Ltd. (Patrick Burns)
Ref. No. 1990.69557
Sheet 3 of 15 (312) 360 0080

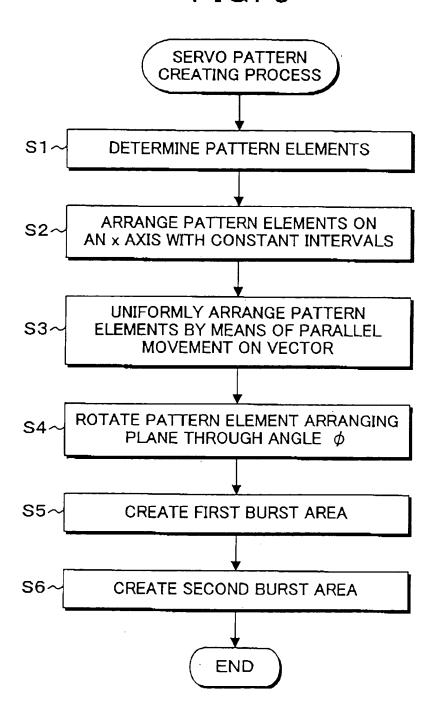
FIG. 3





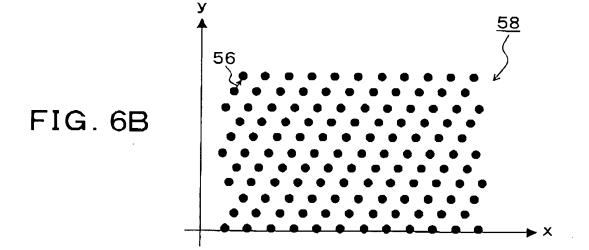
POSITION DETECTING METHOD,... Feb. 9, 2004
Reiji Shimatani
Greer, Burns & Crain, Ltd. (Patrick Burns)
Ref. No. 1990.69557
Sheet 5 of 15 (312) 360 0080

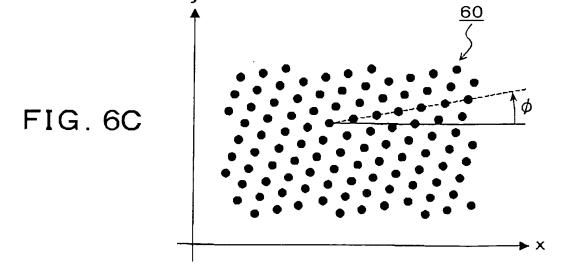
FIG. 5



POSITION DETECTING METHOD,... Feb. 9, 2004
Reiji Shimatani
Greer, Burns & Crain, Ltd. (Patrick Burns)
Ref. No. 1990.69557
Sheet 6 of 15 (312) 360 0080

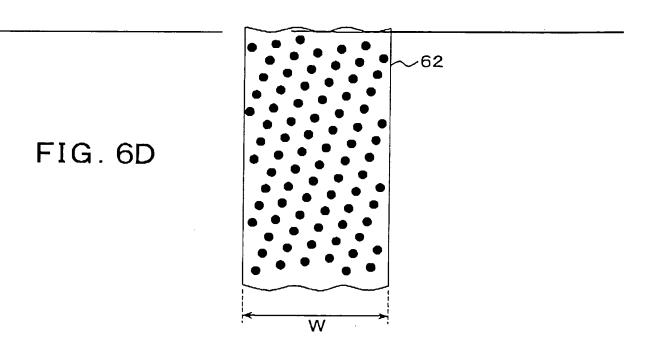


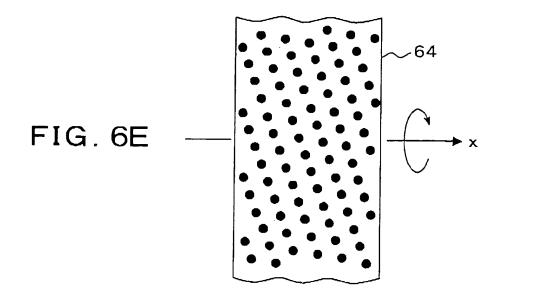




POSITION DETECTING METHOD, ... Feb. 9, 2004
Reiji Shimatani
Greer, Burns & Crain, Ltd. (Patrick Burns)
Ref. No. 1990.69557
Sheet 7 of 15 (312) 360 0080

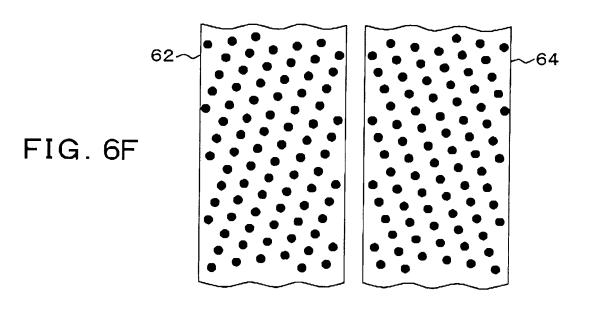
7/15

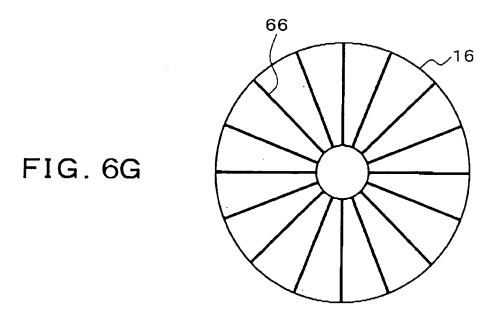




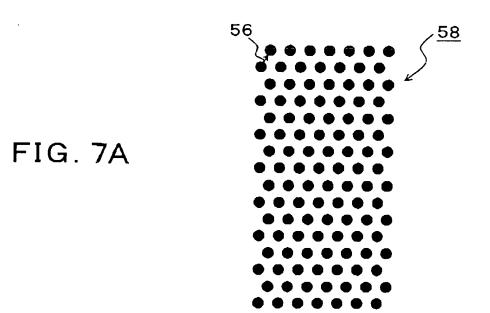
POSITION DETECTING METHOD,... Feb. 9, 2004
Reiji Shimatani
Greer, Burns & Crain, Ltd. (Patrick Burns)
Ref. No. 1990.69557
Sheet 8 of 15 (312) 360 0080

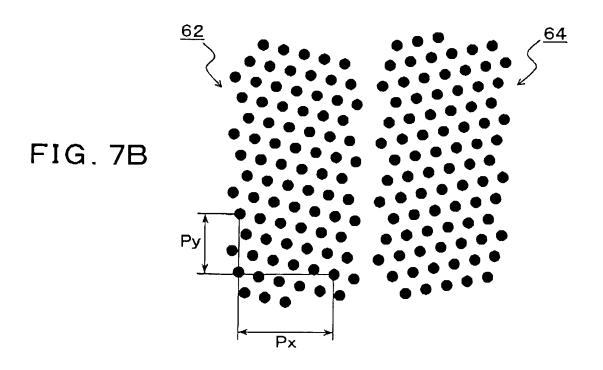
8/15





POSITION DETECTING METHOD,... Feb. 9, 2004
Reiji Shimatani
Greer, Burns & Crain, Ltd. (Patrick Burns)
Ref. No. 1990.69557
Sheet 9 of 15 (312) 360 0080

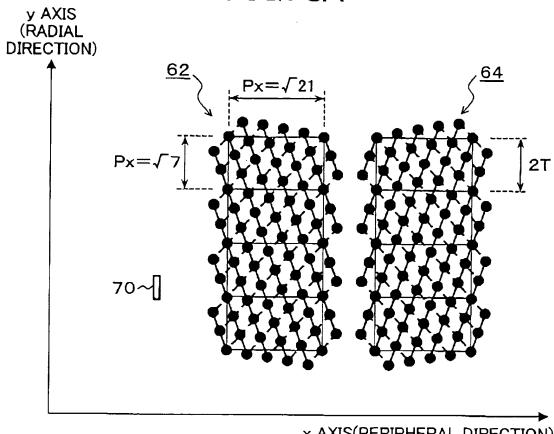




POSITION DETECTING METHOD,... Feb. 9, 2004
Reiji Shimatani
Greer, Burns & Crain, Ltd. (Patrick Burns)
Ref. No. 1990.69557
Sheet 10 of 15 (312) 360 0080

10/15

FIG. 8A



× AXIS(PERIPHERAL DIRECTION)

FIG. 8B

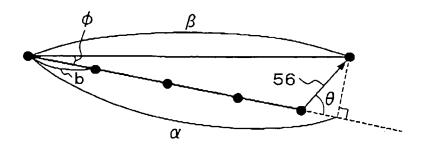
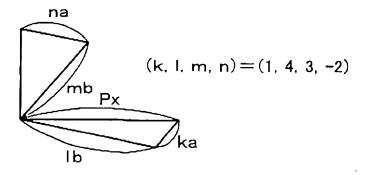


FIG. 8C



POSITION DETECTING METHOD,... Feb. 9, 2004
Keiji Shimatani
Greer, Burns & Crain, Ltd. (Patrick Burns)
Ref. No. 1990.69557
Sheet 11 of 15 (312) 360 0080

FIG. 9

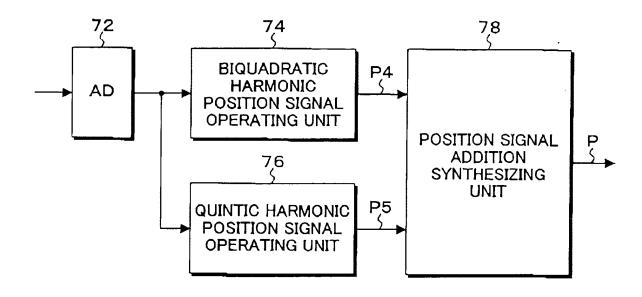
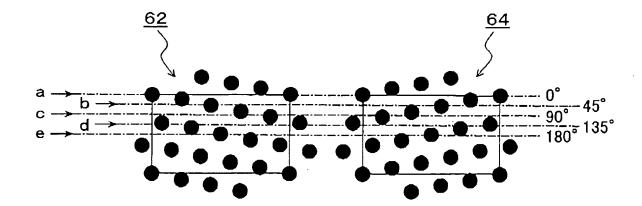
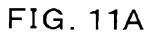


FIG. 10



POSITION DETECTING METHOD,... Feb. 9, 2004
Reiji Shimatani
Greer, Burns & Crain, Ltd. (Patrick Burns)
Ref. No. 1990.69557
Sheet 12 of 15 (312) 360 0080

12/15



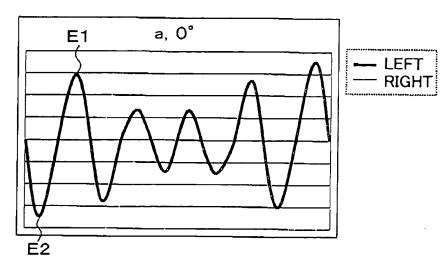


FIG. 11B

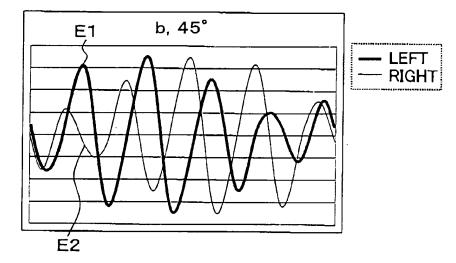
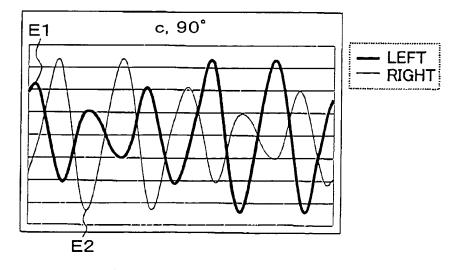
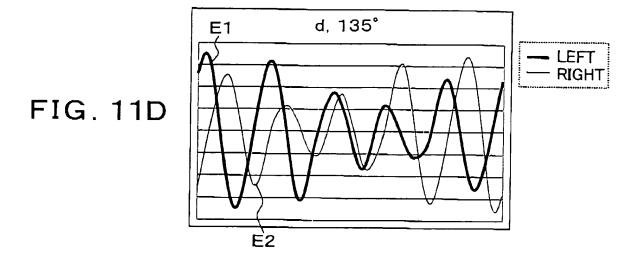
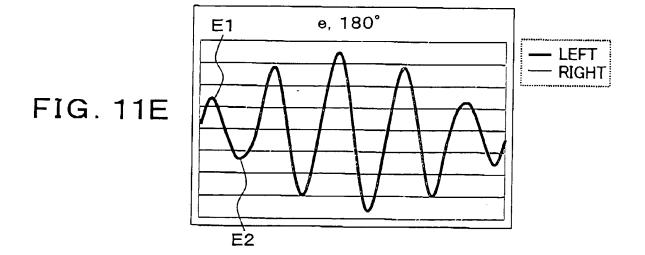


FIG. 11C



POSITION DETECTING METHOD,... Feb. 9, 2004
Keiji Shimatani
Greer, Burns & Crain, Ltd. (Patrick Burns)
Ref. No. 1990.69557
Sheet 13 of 15 (312) 360 0080





POSITION DETECTING METHOD,... Feb. 9, 2004
Reiji Shimatani
Greer, Burns & Crain, Ltd. (Patrick Burns)
Ref. No. 1990.69557
Sheet 14 of 15 (312) 360 0080

14/15

FIG. 12A

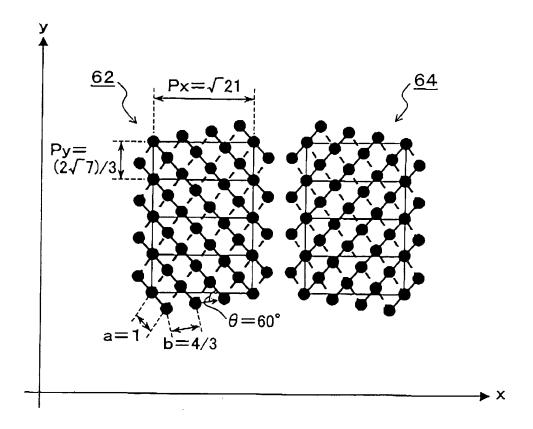
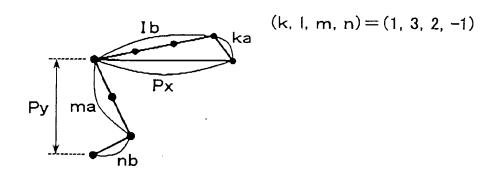


FIG. 12B



POSITION DETECTING METHOD,... Feb. 9, 2004
Reiji Shimatani
Greer, Burns & Crain, Ltd. (Patrick Burns)
Ref. No. 1990.69557
Sheet 15 of 15 (312) 360 0080

FIG. 13A

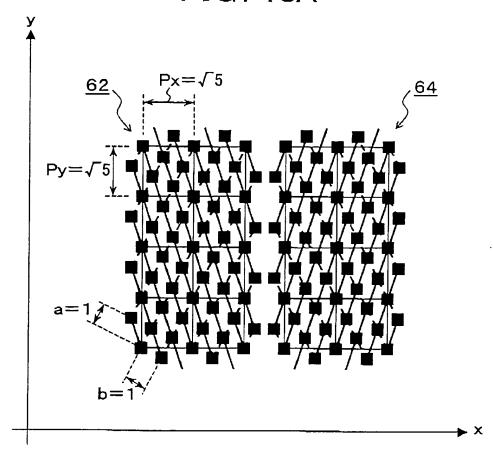


FIG. 13B

